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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/067,883	02/08/2002	Satoshi Kume	011775	6620

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EXAMINER

KILKENNY, TODD J

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 06/30/2003

6

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/067,883

Applicant(s)

KUME ET AL.

Examiner

Todd J. Kilkenney

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2,5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

2. Claim 1 recites the limitation "the outer side on the container's interior side" in line 14. There is insufficient antecedent basis for this limitation in the claim as it is unclear what the container is and therefore what and where the container's interior is.

3. Claim 1 recites the limitation "the outer side on the cutting side" in ^{line}17. There is insufficient antecedent basis for this limitation in the claim. It is unclear what the cutting side defines?

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1 and 3 - 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi (EP 0 990 587 A2) in view of Kume et al (EP 0 979 723 A2).

Hayashi teach a high-frequency heat-sealing apparatus comprising, as shown in Figs. 3 and 4, paired openable-and-closable pressing members composed of a pressing member 23 (sealing jaw) equipped with a high-frequency coil (22), and a pressing

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member 25 (opposing jaw) made of a rigid rubber 24 (paragraph [0020]). Hayashi disclose, "The invention is characterized in that a ridge shaped to contain a partial curve is so formed on the action face of the high-frequency coil as to press the central portion of the sealed zone on the two right and left sides where the width of the sealed zone is rounded and narrowed." (paragraph [0023]). The heat-sealing apparatus also includes a flash portion for the molten thermoplastic formed adjacent to the outer side of the cutting side of the high-frequency coil (see element 33; Figure 3).

The heat-sealing apparatus of Hayashi fails to disclose in combination with the flash portion a groove formed on the action face adjacent to the outer side on the container's interior side of a sealed zone.

Kume et al also teach a heat-sealing apparatus comprising paired openable-and-closable pressing members composed of a pressing member 3 (sealing jaw) equipped with a high-frequency coil (2), and a pressing member 5 (opposing jaw) made of a rigid rubber (4). In combination with a ridge (11), in the sealing jaw 3 there is formed a groove (16) capable of forming a synthetic resin bulge (15) adjacent to the outer side of a sealed zone on a container's interior side (Figure 6).

In view of Kume et al, it would have been obvious to one of ordinary skill in the art at the time of the invention to include a groove capable of forming a synthetic resin bulge adjacent to the outer side of a sealed zone in the heat-sealing apparatus of Hayashi as providing a groove adjacent to the outer side a high frequency coil improves the fluidity of the molten resin of the packing material being sealed by guiding the flow of

resin into the groove. Furthermore, even if a molten resin bead is formed, said groove provides for protection against cracks (see Kume paragraph [0012]).

As to claim 3, see paragraph [0028] of Hayashi, which discloses providing a band-shaped magnetic member.

As to claim 4, see paragraph [0023] and Figure 7 of Hayashi, which disclose the ridge to be one continuous ridge that traverses over the whole area of the longitudinal direction of a sealed zone.

As to claim 5, see again paragraph [0023] of Hayashi, which defines the ridge to be arcuate.

As to claim 6, see paragraph [0014] of Kume et al, which defines the groove to be arcuate in cross section having a depth smaller than one half of its width.

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hayashi (EP 0 990 587 A2) in view of Kume et al (EP 0 979 723 A2) as applied to claim 1 above, and further in view of Iwano et al (EP 0 730 946 A2).

Neither of the two references applied in the rejection above, appear to suggest an inclined action face so that the interval of the paired pressing members when pressed gradually broadens as it goes toward the groove.

In EP 0 730 946 A2, Iwano et al teach a heat-sealing device for liquid-filled tube comprising paired openable-and-closable pressing members composed of a pressing member 24 equipped with a high-frequency coil (2) and a pressing member 23 including pressing pads (34 and 35). As diagrammed in Figure 5, pressing member (24) includes

a pressing face comprising an upper sealer (44) portion divided into a primary sealing portion (51), secondary sealing portion (52) and tertiary sealing portion (53), wherein the secondary sealing portion is inclined at a predetermined angle so that when the pressing members (23 and 24) are closed, the secondary sealing portion is so inclined as to gradually recede from the forward end face of pad (34) and the ridge.

It would have been obvious to one of ordinary skill in the art at the time of the invention to include an inclined sealing portion to the pressing members of the heat-sealing apparatus as taught by the references as combined above so that the paired pressing members when pressed, gradually broaden towards the groove to further aid in directing the flow of the molten resin and/or liquid from the sealed tube into the groove and away from being trapped by surface irregularities between the ridge and groove therein protecting against faulty seals.

Double Patenting

7. Claims 1 – 6 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 4 and 6 of copending Application No. 10/067828 in view of Iwano et al (EP 0 730 946 A2), Hayashi (EP 0 990 587 A2) and/or Kume et al (EP 0 979 723 A2). Claim 1 of the copending application discloses all the claimed limitations of the current applications claim 1 with the exception of “a ridge shaped to contain a partial curve formed on the action of a high-frequency coil”. However, in view of the state of the art as disclosed by the exemplary evidence of Iwano et al, Hayashi and Kume et al, all of which disclose heat-

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sealing apparatuses to include such a ridge, it would have been obvious to one of ordinary skill in the art at the time of the invention to include a ridge in the heat-sealing apparatus of the copending application as such ridges are known to aid in directing the flow of the molten resin of the packing material and the flow of any liquid from the package trapped therein out of the sealed zone, thereby improving the overall seal.

As to claim 2, Iwano et al disclose an inclined pressing face leading up to the ridge to further aid in directing the flow of molten resin and the flow of liquid from the package out of the sealed zone.

As to claim 3 of the present application, see claim 6 of the copending application.

As to claims 4 and 5 of the present application, Hayashi and Kume et al suggest a ridge that is one continuous linear ridge that traverses over the whole area of the longitudinal direction of the sealed zone, wherein the transverse contour of the ridge is arcuate.

As to claim 6 of the present application, see claim 4 of the copending application.

This is a provisional obviousness-type double patenting rejection.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Todd J. Kilkenny** whose telephone number is **(703) 305-6386**. The examiner can normally be reached on Mon - Fri (9 - 5).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball can be reached on (703) 308-2058. The fax phone numbers

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for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

TJK

TJK
June 24, 2003

JEFF H. AFTERGUT
PRIMARY EXAMINER
GROUP 1300